PRIVATE SEWAGE DISPOSAL SYSTEMS
PERCOLATION TEST AND BORING REQUIREMENTS

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING AND BUILDING
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Promoting the Wise Use of Land • Helping to Build Great Communities

Only those individuals trained and educated to perform, understand, and evaluate field conditions as they relate to on-site sewage treatment are allowed to perform percolation and boring tests. The individuals supervising the field work must be named along with their education or training background in the description of the test procedure section of the report.

A. Testing procedures for leach lines. Percolation test

1. Test hole openings should have an 8-12 inch diameter, or be 7-11 inches on the side if square. The walls should be vertical.

2. The bottom of the test hole should correspond with the bottom of the proposed trench and shall be covered with 2 inches of gravel.

3. Presoak the test hole overnight, prior to testing. For sandy soils, presoak until water level stabilizes, see B-1 below.

4. The height of the water should be re-filled to initial height of between 8 and 10 inches over the gravel after each reading.

5. The surface of the hole shall be un-compacted: any cobbles protruding from the surface shall be left in place.

B. Measurements

1. In sandy soils in which two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every ten minutes. The drop that occurs during the final ten minutes should be used to calculate the percolation rate. Field data must show the two 25 minute readings, along with the six-10 minute readings.

2. In all other than sandy soils, pre soak (fill) and wait overnight. If necessary, Re-fill the hole the next day. Obtain at least 12 measurements per hole over at least six hours with a precision of at least 0.25 inch. Intervals between readings shall be approximately 30 minutes. The drop that occurs during the last 30 minutes is used to calculate the percolation rate. Field data must show the twelve 30 minute readings.

C. Testing procedure for Dry Wells (Seepage Pits) Performance Test

1. The hole diameter should be between 6 to 8” The depth should be the same as the depth proposed to a maximum of 50’

2. Carefully fill the hole with clear water to a maximum depth of 4’ below the surface of the ground, or if cuts are anticipated, to the depth of the assumed inlet.

3. All holes shall be pre-soaked for 24 hours unless the site consists of sandy soils containing little or no clay. In sandy soils where the water on two consecutive readings seeps away faster than half the wetted depth in 25 minutes or less, re-fill the hole with water, and pre-soak for an additional two hours. After the two hour pre-soak, the test may then be run. The time interval between measurements shall be taken at ten minutes and the test run for one hour. Re-fill to original depth after each reading.

4. For all other soils, the percolation rate measurement shall be made on the day following pre-soak as described above. After 24 hours have elapsed, re-fill the hole to the proposed inlet depth. The fall of water should be measured every half hour over a five hour period. Re-fill the hole after each half hour reading. During the last or the sixth hour, do not re-fill the hole after the half hour reading. Be sure to check the total hole depth every half hour as well to see if any caving has occurred.

5. Readings will be in min/inch just like they are for leachlines. Rates are set by the RWQCB. Utilize 0.3 gallons per square foot per day for disposal rate, and 375 gallons per day average daily flow per household, up to four bedrooms.

6. Seepage pits will not be allowed when percolation rates are slower than 55 minutes and inch.

D. Exploratory Boring

1. An exploratory boring is a hole excavated or drilled in the area where the disposal field is proposed in order to determine the type of soil, moisture content, depth of water table, or impervious material.

2. All borings must extend to a minimum depth of ten feet below the bottom of the proposed disposal system so as to determine the depth of the water table, bedrock, and or impervious material. Minimum depth of any boring is 15 feet or stated refusal.

3. When percolation results are faster than 1 minute an inch, the exploratory boring shall be drilled to a depth of 50 feet below the depth of the proposed disposal system. For percolation results between 1 and 4 minutes an inch, the boring shall be drilled to a depth of 20 feet below the proposed disposal system.

4. A log of the soil spectrum shall be conducted and included as part of the written percolation test.

5. All borings used to check for groundwater must stay open a minimum of 24 hours prior to the final reading and groundwater check. Water levels are to be recorded at the highest discovered level following the 24 hour period. If any groundwater is encountered within those limits that may affect the subsurface sewage disposal , an evaluation by the engineer must be given in the conclusion section of the report to what maximum depth the water level may be anticipated to rise, taking into consideration the date of the test, season, rainfall, local well information, and historic high groundwater data.

6. Measurements of depth to seasonal high groundwater shall be conducted from November 1st to April 1st unless otherwise specified by the building official.

7. In areas with seasonal high groundwater, a groundwater level monitoring well shall be installed to a minimum depth of ten feet in the area of a proposed wastewater dispersal system. Groundwater monitoring wells shall be a minimum of 3 inch PVC pipe and shall have a removable cap. The top 18 inches around the pipe shall be sealed with Bentonite or other suitable sealer to prevent surface pollutants from intruding into the well. Below 18 inches, the pipe shall be perforated. Monitoring

wells shall not be deeper than 15 feet, unless required by the building official. If an impermeable layer is present at a depth of less than ten feet below the ground surface, the depth of the groundwater level monitoring well shall be decreased to the depth of the impermeable layer.

8. Percolation tests and borings should be located in the area that the sewage disposal system is ultimately placed. In order to be as close as possible, the engineer must assume that the system will cover a much larger area than any one test covers: and therefore random testing should be conducted.

The following is a list of the number of required percolation tests and required number of borings per parcel:

- On all lots 1 acre or larger, a minimum of 4 percolation tests and one boring will be required for all single family dwellings.

- On all lots one acre or larger, for seepage pits, a minimum of 1 percolation test and boring will be required for all single family dwellings. Boring shall be a minimum of ten feet deeper than proposed pits, to rule out groundwater or impermeable strata.

- For commercial & industrial developments, 4 percolation tests and one boring for each 2000 gallon septic tank. (leachlines)

- For commercial & industrial developments, 2 percolation tests and one boring for each 2000 gallon septic tank. (drywell)

- For all Subdivisons and Tracts, 3 percolation tests and one boring on each parcel.